

April 29, 2008

Mr. Charles L. A. Terreni Chief Clerk & Administrator Public Service Commission of South Carolina P. O. Drawer 11649 Columbia, South Carolina 29211

RE: 2007 Testing Program of Meters, Docket No. 89-499-E

Dear Mr. Terreni:

Under Commission Rule 103-370(1) and in accordance with the Commission's Order in Docket No. 89-499-E, Order No. 90-131, dated February 6, 1990, Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc. (Progress Energy) is authorized to use a sample meter testing plan for testing single-phase meters and three-phase (self-contained) non-demand meters, and to periodically test other meters in accordance with approved test plans. Progress Energy is transmitting herewith eleven copies of the results of the Company's 2007 Statistical Watt-hour Meter Sample and Periodic Meter Test Results.

All of the meter groups contained in the sample and periodic meter testing plans passed the test criteria.

Sincerely,

Len S. Anthony

Len & auto

General Counsel - Progress Energy Carolinas, Inc.

Enclosures

cc:

Mr. John Flitter

260668

# 2007 Watthour Meter Sample Watthour Meter Groupings

Mfg	Group	Test Method	Number Tested	Sample Conclusion
Landis & Gyr	17	Double	178	Passes Test
ABB	31	Double	181	Passes Test
Landis & Gyr	32	Double	177	Passes Test
GE	33	Double	177	Passes Test
Sangamo	34	Attribute	174	Passes Test
ABB	35	Double	177	Passes Test
GE	37	Double	176	Passes Test

# SELECTIVE SAMPLE Watthour Meter Group 17 Summary

**Group Information** 

Manufacturer: L&G Watthour Meter Type(s): DXMX

PE Type Code(s): U09

Meter Classification: TOS1NI

Methodology: Double Sampling Phase 1

Population: 14718 Sample Size: 178

#### **Full Load Test Summary**

Mean: 99.812

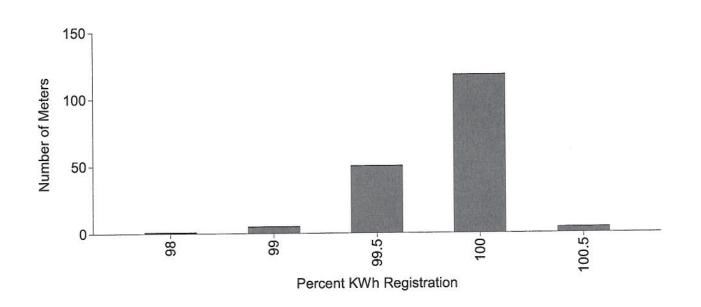
Standard Deviation: 0.2641

Number of Tests > 102%: 0 Number of Tests 98 - 102%: 178 Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 17 Meter Accuracies



# SELECTIVE SAMPLE Watthour Meter Group 31 Summary

**Group Information** 

Manufacturer: ABB

Watthour Meter Type(s): AB1,D4S,D5S,D5S E,D5SE

PE Type Code(s): H13,T31,T50,T73,T78,TB5,TG8

Meter Classification: TO/ND/ED

Methodology: Double Sampling Phase 1

Population: 10901 Sample Size: 181

#### **Full Load Test Summary**

Mean: 100.058

Standard Deviation: 0.2929

Number of Tests > 102%: 0

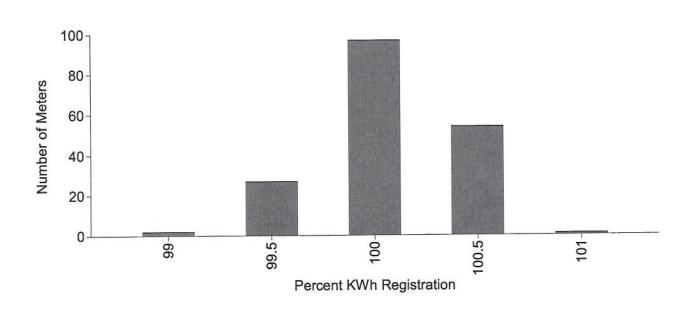
Number of Tests 98 - 102%: 181

Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 31 Meter Accuracies



# SELECTIVE SAMPLE Watthour Meter Group 32 Summary

**Group Information** 

Manufacturer: L&G

Watthour Meter Type(s): MS II,TMS II,TQS

PE Type Code(s): K09,K11,K12,U03,U04,U05

Meter Classification: TD/ND/ST

Methodology: Double Sampling Phase 1

Population: 2370 Sample Size: 177

#### Full Load Test Summary

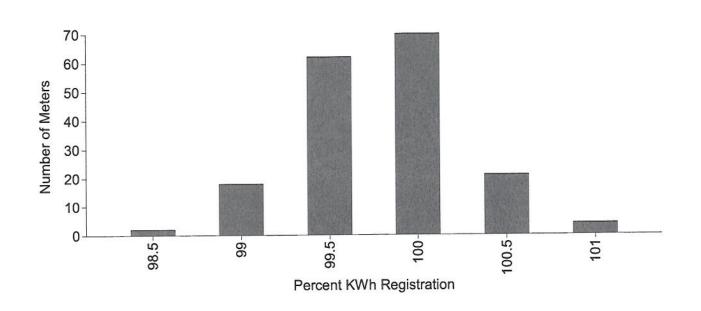
Mean: 99.782 Standard Deviation: 0.4582

Number of Tests > 102%: 0
Number of Tests 98 - 102%: 177
Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 32 Meter Accuracies



### SELECTIVE SAMPLE

**Group Information** 

Manufacturer: GE

Watthour Meter Group 33 Summary

Watthour Meter Type(s): I 50S,I 70S,IL70S,IL70S/2,IM 70S,IM70S,IM70S/2,IRM 70S,IRM70S,

PE Type Code(s): E29,E30,E34,E35,E36,E37,E41,E42,E43,E44,E46,E47,E48,L05,L78,L84,L85,LB7,LC6,LG4,LG7,LL5,LM8

Meter Classification: TO/ND/ED

Methodology: Double Sampling Phase 1

Population: 25038 Sample Size: 177

#### **Full Load Test Summary**

Mean: 99.986

Standard Deviation: 0.2749

Number of Tests > 102%: 0

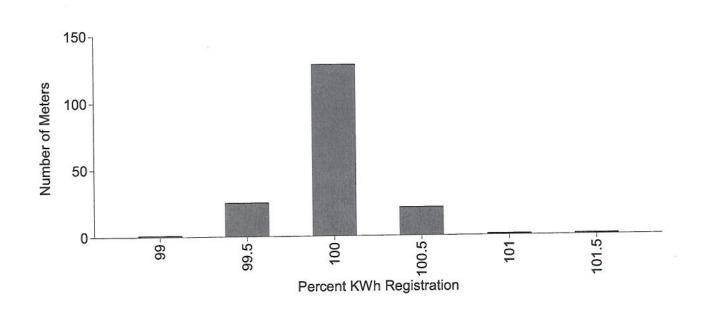
Number of Tests 98 - 102%: 177

Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 33 Meter Accuracies



# SELECTIVE SAMPLE Watthour Meter Group 34 Summary

**Group Information** 

Manufacturer: SAN

Watthour Meter Type(s): J3S,J3TS,J4ESD,J4S,J4TS,J5DS,J5S,J5SD,KWS

PE Type Code(s): A07,A08,A13,A16,A18,A23,M08,M16,M22,M23,M24,M26

Meter Classification: TO/ND/ST

Methodology: Attribute Sampling

Population: 8072 Sample Size: 174

#### **Full Load Test Summary**

Mean: 99.675

Standard Deviation: 1.6964

Number of Tests > 102%: 0

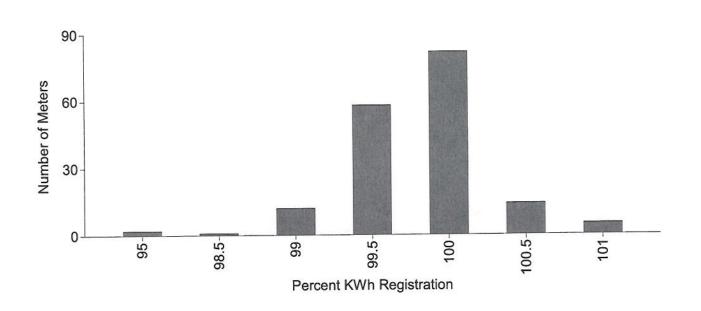
Number of Tests 98 - 102%: 172

Number of Tests < 98%: 2

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 7

### Histogram of Group 34 Meter Accuracies



# SELECTIVE SAMPLE Watthour Meter Group 35 Summary

**Group Information** 

Manufacturer: ABB

Watthour Meter Type(s): A1D,A1D+,A1T+,A1TLQ+,AIT+,AITLQ+

PE Type Code(s): H21,H22,H24,H28,H30,H31,H32,H33,H34,TE4,TE6,TG6,TG7

Meter Classification: NDS1NI

Methodology: Double Sampling Phase 1

Population: 7819 Sample Size: 177

#### **Full Load Test Summary**

Mean: 100

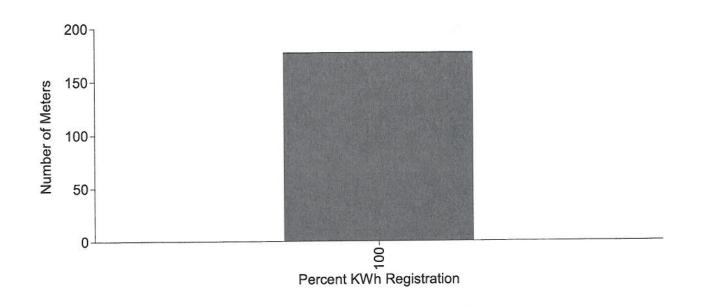
Standard Deviation: 0.0363

Number of Tests > 102%: 0
Number of Tests 98 - 102%: 177
Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 35 Meter Accuracies



# SELECTIVE SAMPLE Watthour Meter Group 37 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): KV,KV2C,V 66S,VM 62S

PE Type Code(s): LR8,LT3,LT6,R51,R73

Meter Classification: NDS1NI

Methodology: Double Sampling Phase 1

Population: 4613 Sample Size: 176

#### **Full Load Test Summary**

Mean: 99.895

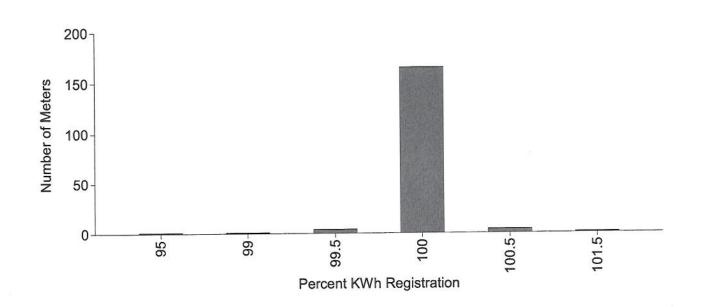
Standard Deviation: 1.3104

Number of Tests > 102%: 0 Number of Tests 98 - 102%: 175 Number of Tests < 98%: 1

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

## Histogram of Group 37 Meter Accuracies



#### 2007 Watthour Meter Periodic Tests Watthour Meter Groupings

Mfg	Group	Test Method	Number Tested	Sample Conclusion
GE	813	Field	36	n/a
GE	814	Field	5	n/a
GE	816	Field	13	n/a
GE	818	Field	72	n/a
GE	819	Field	86	Passes Test
GE	820	Field	1	n/a
ABB	824	Field	4	n/a
ABB	827	Field	4	n/a
ABB	828	Field	5	n/a
Sangamo	833	Field	2	n/a
GE	845	Field	160	Passes Test
ABB	846	Field	329	Passes Test
GE	847	Field	510	Passes Test
Landis & Gyr	848	Field	289	Passes Test
Sangamo	903	Shop	2	n/a
GE	915	Shop	78	Passes Test
GE	916	Shop	14	n/a
ABB	924	Shop	30	n/a

NOTE: 75 tests are required to determine pass/fail criteria; tests above marked "n/a" had sample sizes smaller than 75

# FIELD PERIODIC Watthour Meter Group 813 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): VRM 63A, VRM 64A, VRM 64S, VRM64A, VRM64S

PE Type Code(s): LC8,LG8,LH9,LB9,LG6

Meter Classification: TOT3NI

Methodology: Periodic Test

Population: 1433 Sample Size: 36

**Full Load Test Summary** 

Mean: 100.098

Standard Deviation: 0.2761

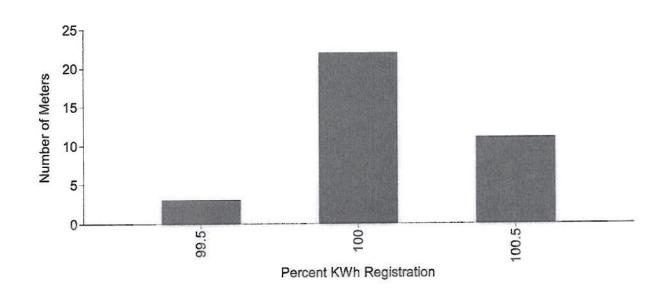
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 36

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 813 Meter Accuracies



#### FIELD PERIODIC

**Group Information** 

Watthour Meter Group 814 Summary

Manufacturer: GE

Watthour Meter Type(s): VW 63A, VW 63S, VW 64A, VW 64S, VW 63S, VW 64S

PE Type Code(s): LH6,L44,L47,L50,LH7,L73,LE3,L71

Meter Classification: NDT3WI

Methodology: Periodic Test

Population: 38 Sample Size: 5

#### **Full Load Test Summary**

Mean: 100.174

Standard Deviation: 0.1887

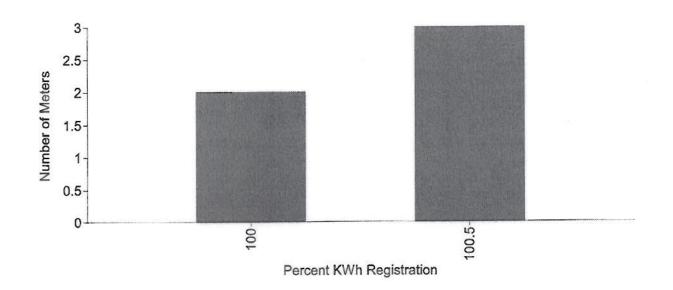
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 5

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 814 Meter Accuracies



Watthour Meter Group 816 Summary

## FIELD PERIODIC

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): VRMW 64A, VRMW64A

PE Type Code(s): LB8,LG5

Meter Classification: TOT3WI

Methodology: Periodic Test

Population: 39 Sample Size: 13

**Full Load Test Summary** 

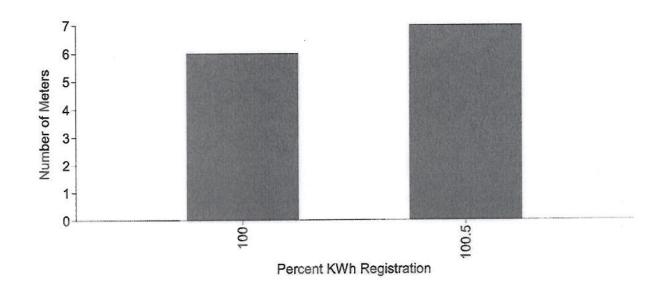
Mean: 100.188

Standard Deviation: 0.2474

Number of Tests > 102%: 0 Number of Tests 98 - 102%: 13 Number of Tests < 98%: 0

Group Test Summary

## Histogram of Group 816 Meter Accuracies



FIELD PERIODIC
Watthour Meter Group 818 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): V 63A,V 63S,V 64A,V 64S,V63A,V63S,V64A,V64S

PE Type Code(s): LF1,LE7,LF7,LD3,LF8,LE8,LE9,L42,L64,LD2,L48,L45

Meter Classification: NDT3NI

Methodology: Periodic Test

Population: 1834 Sample Size: 72

**Full Load Test Summary** 

Mean: 100.068

Standard Deviation: 0.2847

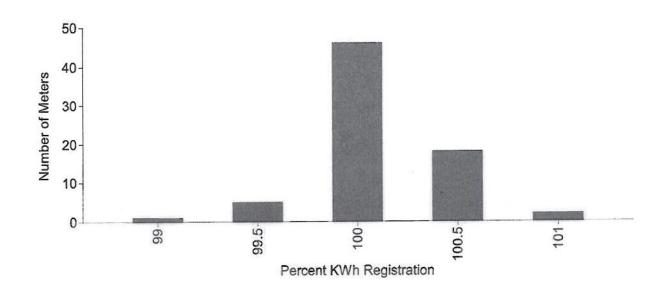
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 72

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 818 Meter Accuracies



# FIELD PERIODIC Watthour Meter Group 819 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): VM 63A, VM 63S, VM 64A, VM 64S, VM63A, VM63S, VM64A, VM64S

PE Type Code(s): LF4,LF9,LD4,LB5,LF5,LC1,LF6,LF2,LC5,LB3

Meter Classification: EDT3NI

Methodology: Periodic Test

Population: 4004 Sample Size: 86

**Full Load Test Summary** 

Mean: 100.09

Standard Deviation: 0.2463

Number of Tests > 102%: 0

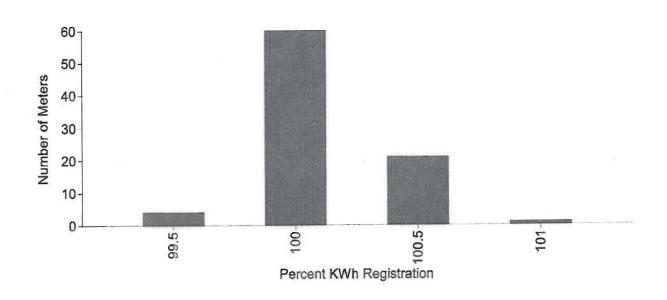
Number of Tests 98 - 102%: 86

Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 1

### Histogram of Group 819 Meter Accuracies



# FIELD PERIODIC Watthour Meter Group 820 Summary

**Group Information** 

Manufacturer: GE Watthour Meter Type(s): VM 63A

PE Type Code(s): L43,L46

Meter Classification: MDT3NI

Methodology: Periodic Test

Population: 3 Sample Size: 1

**Full Load Test Summary** 

Mean: 99.74

Standard Deviation: 0

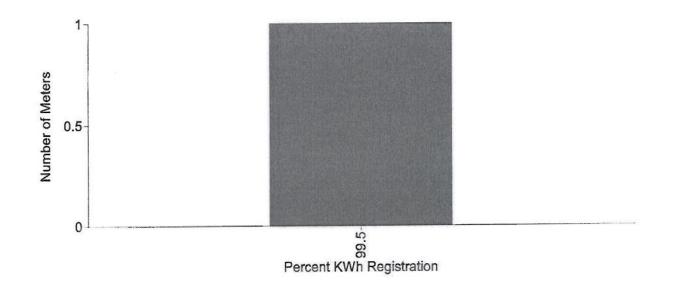
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 1

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 820 Meter Accuracies



Watthour Meter Group 824 Summary

## FIELD PERIODIC

**Group Information** 

Manufacturer: ABB

Watthour Meter Type(s): D4S2,D4S3,D5S3

PE Type Code(s): T34,T61,T66

Meter Classification: NDT3WI

Methodology: Periodic Test

Population: 14 Sample Size: 4

**Full Load Test Summary** 

Mean: 99.773

Standard Deviation: 0.1038

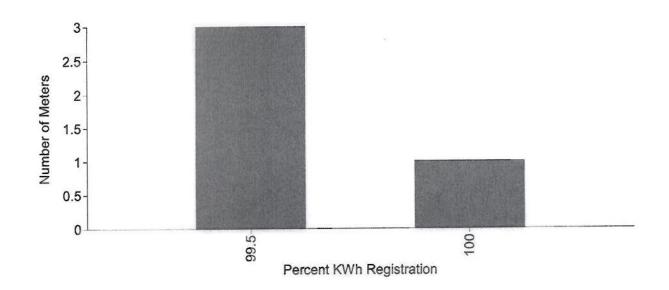
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 4

Number of Tests < 98%: 0

**Group Test Summary** 

### Histogram of Group 824 Meter Accuracies



# FIELD PERIODIC Watthour Meter Group 827 Summary

**Group Information** 

Manufacturer: ABB

Watthour Meter Type(s): ABA-2,D5A 2,D5S 3

PE Type Code(s): T76,T77,T79,TB7,TC3

Meter Classification: NDT3NI

Methodology: Periodic Test

Population: 150 Sample Size: 4

#### Full Load Test Summary

Mean: 99.95

Standard Deviation: 0.3382

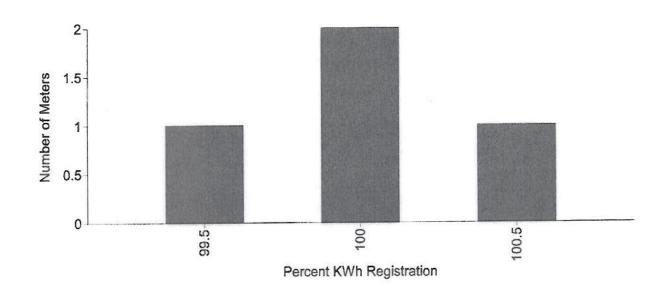
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 4

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 827 Meter Accuracies



#### FIELD PERIODIC

**Group Information** 

Watthour Meter Group 828 Summary

Manufacturer: ABB

Watthour Meter Type(s): D5A 2E,D5A 3E,D5S 3E,D5S2E

PE Type Code(s): T71,T72,T80,T96

Meter Classification: EDT3NI

Methodology: Periodic Test

Population: 321 Sample Size: 5

**Full Load Test Summary** 

Mean: 100.094

Standard Deviation: 0.1545

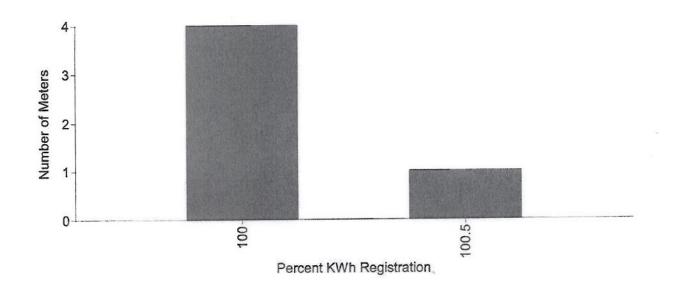
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 5

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 828 Meter Accuracies



FIELD PERIODIC
Watthour Meter Group 833 Summary

#### **Group Information**

Manufacturer: SAN Watthour Meter Type(s): SL4A

PE Type Code(s): M29

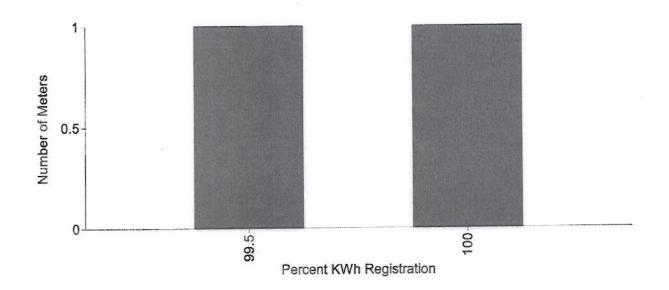
Meter Classification: NDT3NI
Methodology: Periodic Test
Population: 65
Sample Size: 2

#### **Full Load Test Summary**

Mean: 99.67 Standard Deviation: 0.32 Number of Tests > 102%: 0 Number of Tests 98 - 102%: 2 Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 833 Meter Accuracies



Watthour Meter Group 845 Summary

### FIELD PERIODIC

#### **Group Information**

Manufacturer: GE

Watthour Meter Type(s): EV-3, EV4, EV-4

PE Type Code(s): LK9,LL6,LM6,LN2,LJ8,LK5,LN4,LK6,LM7,LN1,LM5,LL7,LM4,LK1,LM2,LJ9,LM3, LL8,LL2,LM1,LJ5,LL9,LJ6,LJ7,LL1

Meter Classification: SDT3NI

Methodology: Periodic Test

Population: 5600 Sample Size: 160

#### **Full Load Test Summary**

Mean: 100.07

Standard Deviation: 0.1604

Number of Tests > 102%: 0

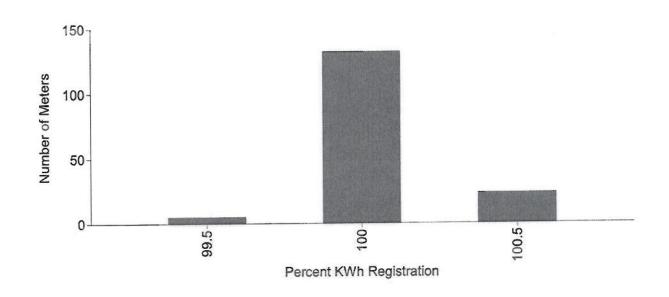
Number of Tests 98 - 102%: 160

Number of Tests < 98%: 0

#### **Group Test Summary**

This Group PASSES the sample test since the number of fast watthour meters is less than 2

### Histogram of Group 845 Meter Accuracies



#### FIELD PERIODIC

**Group Information** 

Watthour Meter Group 846 Summary

Manufacturer: ABB

Watthour Meter Type(s): A1D,A1D+,A1RLQ+,A1T+,AID+,AIRLQ+

PE Type Code(s): TA9,TH3,TF6,TF4,TH2,TA6,TA4,TA8,TA5,T98,TD9,TB1,TC7,TF7,TC9,TD8,TC8, TD6,TF5,TC6,TD7,TA3,TF3,TD5

Meter Classification: SDT3NI

Methodology: Periodic Test

Population: 5750 Sample Size: 329

**Full Load Test Summary** 

Mean: 99.981

Standard Deviation: 0.0663

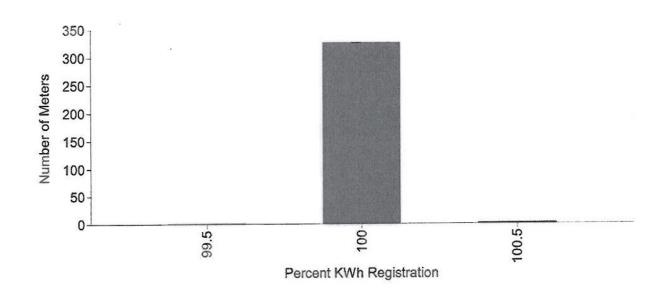
Number of Tests > 102%: 0 Number of Tests 98 - 102%: 329

Number of Tests < 98%: 0

**Group Test Summary** 

This Group PASSES the sample test since the number of fast watthour meters is less than 6

### Histogram of Group 846 Meter Accuracies



## FIELD PERIODIC Watthour Meter Group 847 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): KV,KV2C

PE Type Code(s): LR9,LP2,LP3,LP4,LT1,LN9,LN8,LN7,LR3,LP5,LP9,LR2,LP6,LN6,LT8,LR1,LP7,

LP8,LT7

Meter Classification: SDT3NI

Methodology: Periodic Test

Population: 9445 Sample Size: 510

Full Load Test Summary

Mean: 99.764

Standard Deviation: 3.5748 Number of Tests > 102%: 6

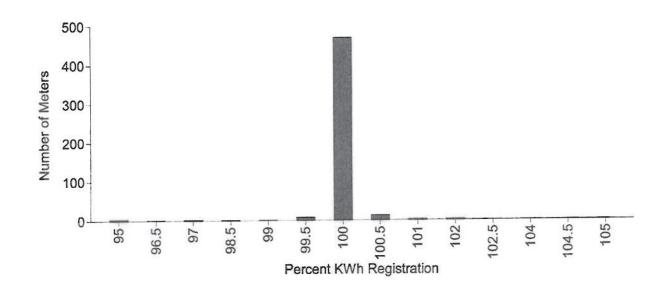
Number of Tests 98 - 102%: 497

Number of Tests < 98%: 7

**Group Test Summary** 

This Group PASSES the sample test since the number of fast watthour meters is less than 11

### Histogram of Group 847 Meter Accuracies



## FIELD PERIODIC Watthour Meter Group 848 Summary

**Group Information** 

Manufacturer: L&G Watthour Meter Type(s): AXS4

PE Type Code(s): K15,K16

Meter Classification: STT3NI

Methodology: Periodic Test

Population: 4525 Sample Size: 288

**Full Load Test Summary** 

Mean: 99.643

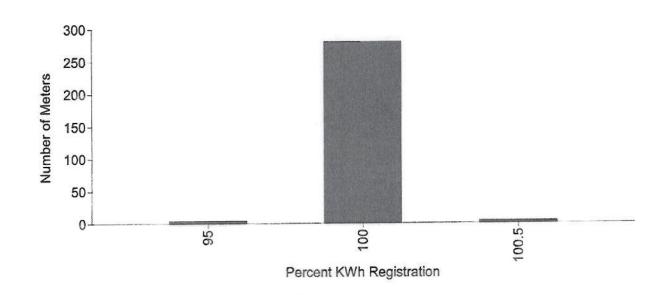
Standard Deviation: 5.3328

Number of Tests > 102%: 0 Number of Tests 98 - 102%: 284 Number of Tests < 98%: 4

**Group Test Summary** 

This Group PASSES the sample test since the number of fast watthour meters is less than 4

### Histogram of Group 848 Meter Accuracies



SHOP PERIODIC
Watthour Meter Group 903 Summary

#### **Group Information**

Manufacturer: SAN Watthour Meter Type(s): SL5SD

PE Type Code(s): N14

Meter Classification: EDS3NI

Methodology: Periodic Test

Population: 153 Sample Size: 2

#### **Full Load Test Summary**

Mean: 100.295

Standard Deviation: 0.045

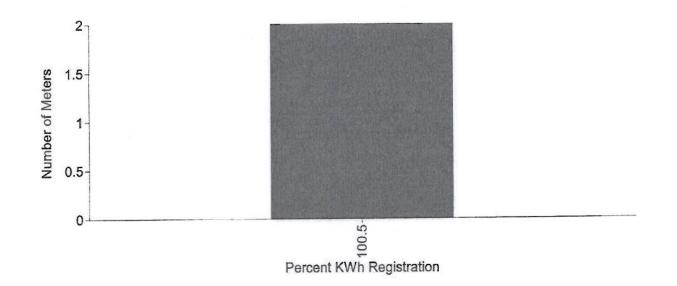
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 2

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 903 Meter Accuracies



# SHOP PERIODIC Watthour Meter Group 915 Summary

**Group Information** 

Manufacturer: GE

Watthour Meter Type(s): VM 65S, VM 66S

PE Type Code(s): R68,R69

Meter Classification: EDS3NI

Methodology: Periodic Test

Population: 2545 Sample Size: 78

**Full Load Test Summary** 

Mean: 99.858

Standard Deviation: 0.2857

Number of Tests > 102%: 0

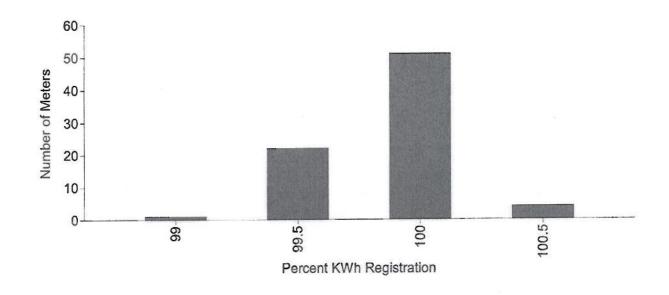
Number of Tests 98 - 102%: 78

Number of Tests < 98%: 0

**Group Test Summary** 

This Group PASSES the sample test since the number of fast watthour meters is less than 1

### Histogram of Group 915 Meter Accuracies



SHOP PERIODIC
Watthour Meter Group 916 Summary

#### **Group Information**

Manufacturer: GE

Watthour Meter Type(s): VRM 65S, VRM 66S, VRM65S

PE Type Code(s): R72,R79,R82

Meter Classification: TOS3NI

Methodology: Periodic Test

Population: 188 Sample Size: 14

**Full Load Test Summary** 

Mean: 100.09

Standard Deviation: 0.268

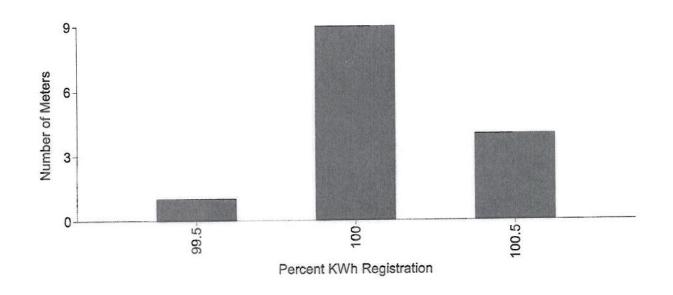
Number of Tests > 102%: 0

Number of Tests 98 - 102%: 14

Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 916 Meter Accuracies



SHOP PERIODIC
Watthour Meter Group 924 Summary

**Group Information** 

Manufacturer: ABB

Watthour Meter Type(s): D5S 7E,D5S 8E

PE Type Code(s): Y35,Y36

Meter Classification: EDS3NI Methodology: Periodic Test

> Population: 693 Sample Size: 30

Full Load Test Summary

Mean: 100.431

Standard Deviation: 0.4554

Number of Tests > 102%: 0 Number of Tests 98 - 102%: 30 Number of Tests < 98%: 0

**Group Test Summary** 

## Histogram of Group 924 Meter Accuracies

